

REMARKS

I. STATUS OF CLAIMS

Claims 1, 4, 6-40 and 43-58 are pending. Claims 4, 6-11, 21-39 and 48-58 are withdrawn from consideration as allegedly being drawn to a non-elected invention. No claim is amended herein.

II. REJECTIONS UNDER 35 U.S.C. § 103

A. Rejection based on JP Patent Publication 4-307787 to Iketani (“Iketani”), JP Patent Publication 1-249333 to Nagamine et al. (“Nagamine”), and WO 93/24312 to Papageorge et al. (“Papageorge”).

The Examiner rejects claims 1, 12-20, 40, and 43-47 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Iketani in view of Nagamine, and further in view of Papageorge. Office Action at page 2. According to the Examiner, Iketani discloses all the claimed elements except Iketani fails to disclose a non-degreased fabric and the specific particles as now claimed. Office Action at page 3. In order to remedy the deficiencies of Iketani, the Examiner turns to Nagamine and Papageorge. As in the previous Office Action, the Examiner turns to Nagamine for its teaching regarding a non-degreased fabric. In addition, the Examiner now cites Papageorge for its teaching of particles. Specifically, the Examiner asserts that Papageorge teaches printed circuit boards comprising a laminate formed by impregnating a resin, such as epoxy into a glass cloth substrate wherein the base resin has highly thermally conductive particles incorporated therein, wherein the particles can be a nitride, a carbide, or graphite. See *id.* at page 3; see also Papageorge at pages 4-5. The Examiner concludes that “the skilled artisan would have been reasonably motivated to modify the teachings of Iketani

by using a nitride, carbide or graphite as the filler material, as taught by Papageorge, to produce a laminate with high thermal conductivity.” Office Action at page 4. Applicants respectfully disagree and traverse the rejection.

In making a rejection under 35 U.S.C. § 103, the Examiner has the initial burden to establish a *prima facie* case of obviousness. See M.P.E.P. § 2143. In its recent decision in *KSR Internat’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 82 U.S.P.Q. 2d 1385 (2007), the Supreme Court confirmed that the “framework for applying the statutory language of §103” was still based on its landmark decision in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 148 U.S.P.Q. 459 (1966). Under *Graham*, there are four factors for consideration when determining whether an invention is obvious:

- (1) the scope and content of the prior art;
- (2) the differences between the prior art and the claims at issue;
- (3) the level of ordinary skill in the art; and
- (4) secondary considerations.

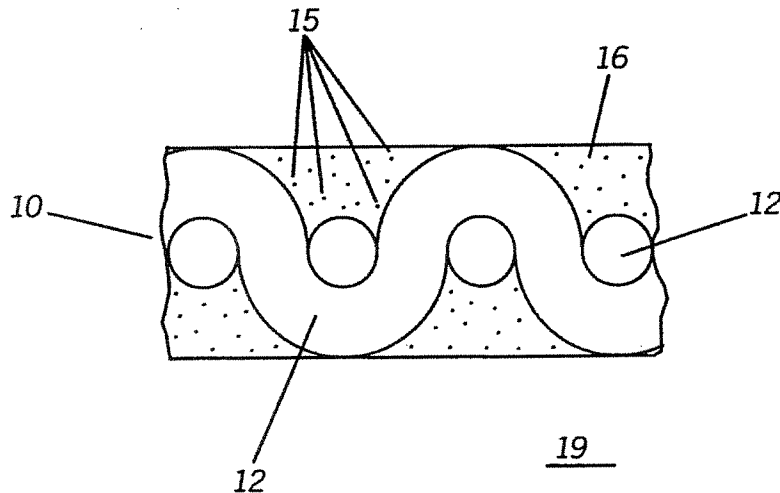
Although the question of obviousness must be resolved on the basis of these factual determinations, the Supreme Court pointed out that there is no inconsistency between the *Graham* analysis and the idea underlying the teaching, suggestion, or motivation (“TSM”) test. *KSR*, 127 S. Ct. at 1741, 82 U.S.P.Q. 2d at 1389. Further, in its recent published examination guidelines, the USPTO has solidified that the TSM test is a valid rationale for determining obviousness. Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg. 57526, 57528 (Dep’t Commerce October 10, 2007). In the present case, the Office cannot establish that the

claimed invention is *prima facie* obvious based on Iketani, Nagamine, and Papageorge for at least the following reasons.

In independent claim 1, the reinforced laminate comprises, “(a) a matrix material; and (b) at least one non-degreased fabric..., wherein at least a portion of the fabric has a resin compatible coating..., and the resin compatible coating comprises a plurality of particles....” Independent claim 40 also includes a matrix material and a non-degreased fabric, wherein at least a portion of the fabric has a resin compatible coating comprising a plurality of particles. From the plain language of independent claims 1 and 40, it is clear that the resin compatible coating, not the matrix material, comprises a plurality of particles. In fact, the coated glass fiber strands of the claimed invention can lessen or eliminate the need for incorporating thermally conductive materials in the matrix resin, which improves laminate manufacturing operations and lowers costly matrix material supply tank purging and maintenance. Applicants’ specification at page 6, lines 25-28.

As discussed above, recognizing the deficiencies in Iketani and Nagamine, the Examiner now cites Papageorge for its teaching of particles recited in Applicants’ claims 1 and 40. As the Examiner points out, Papageorge discloses a base resin having thermally conductive particles dispersed therein. See Papageorge at page 6 (emphasis added). Fig. 1 in Papageorge, which is reproduced below for the Examiner’s convenience, provides an illustration of the laminate disclosed therein.

FIG. 1



As shown in Fig. 1, in the laminate disclosed in Papageorge, a woven glass cloth 10 consists of a network of glass fibers 12 interwoven in a pattern similar to that used to create cloth fabric. Papageorge at page 6. The aluminum nitride particles (thermally conductive particles) 15 in Papageorge are dispersed throughout a (base) resin matrix 16. *Id.* While Papageorge teaches a base resin having dispersed particles, there is nothing in Papageorge that teaches or suggests that any portion of the glass cloth 10 or its fibers 12 is coated with a resin coating comprising a plurality of particles, as in Applicants' claimed invention. Therefore, contrary to the Examiner's assertion, Papageorge fails remedy the deficiencies of Iketani, and one of ordinary skill in the art would not be motivated to modify Iketani and coat a portion of the fiber substrate with a resin compatible coating comprising a plurality of particles, absent the benefit of hindsight.

In summary, Iketani, Nagamine, and Papageorge fail to teach or suggest all the claim limitations, therefore the Examiner has failed to establish that independent claims 1 and 40, and the claims depending therefrom, are *prima facie* obvious based on these cited references. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection.

B. Rejection based on WO 93/24312 to Papageorge et al. (“Papageorge”) and JP Patent Publication 1-249333 to Nagamine et al. (“Nagamine”).

The Examiner rejects claims 1, 12-13, 16-20, 40 and 45-47 under 35 U.S.C. § 103(a) as allegedly being unpatentable based on Papageorge in view of Nagamine. Office Action at page 6. Applicants respectfully traverse this rejection for at least the following reasons.

As discussed in Section II.A. above, Papageorge and Nagamine fail to teach or suggest all the claim limitations. Accordingly, the Examiner has failed to establish that independent claims 1 and 40, and the claims depending therefrom, are *prima facie* obvious based on Papageorge and Nagamine.

In view of the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw the rejection.

III. CONCLUSION


In view of the foregoing remarks, Applicants submit that the claimed invention is not rendered obvious based on the prior art references cited against this application. Applicants therefore respectfully request the Examiner's reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

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